Date: Wed, 23 Jun 93 17:00:42 PDT

From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>

Errors-To: Info-Hams-Errors@UCSD.Edu

Reply-To: Info-Hams@UCSD.Edu

Precedence: Bulk

Subject: Info-Hams Digest V93 #772

To: Info-Hams

Info-Hams Digest Wed, 23 Jun 93 Volume 93 : Issue 772

Today's Topics:

(none)

7.5 Weeks for license Ground Rods In Concrete Heathkit SB-101 Manual up for grabs

INFO NEEDED: biotelemetry system suppliers
Kenwood TM-742A/942A DTMF remote control

Measuring SWR (was: Re: Midland Power-Max Dual Band Antenna)

Rat Shack & SAM REMOVE

TV vs Cable. Why Pay for a FREE Signal
Two-Line Orbital Element Set: Space Shuttle
Using square wave power

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu> Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu> Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available (by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text herein consists of personal comments and does not represent the official policies or positions of any party. Your mileage may vary. So there.

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Date: 23 Jun 93 20:05:46 GMT From: news-mail-gateway@ucsd.edu

Subject: (none)

To: info-hams@ucsd.edu

help

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Date: 23 Jun 93 23:11:49 GMT

From: ogicse!uwm.edu!ux1.cso.uiuc.edu!howland.reston.ans.net!usenet.ins.cwru.edu!

cleveland.Freenet.Edu!as738@network.UCSD.EDU
Subject: 7.5 Weeks for license

To: info-hams@ucsd.edu

Another data point. I took the test on April 29 and got my license (Tech No-code) on June 21. Now I need to get a radio.

So, can anybody tell me how the TRW swap meet in the LA area is? I haven't found anybody who has been there, but I've heard that the good deals are gone early (before it actually starts sometimes). Is there mostly used stuff or are there any new goods available there? Sorry for the wide distribution, but I read Usenet in Cleveland.

Please reply via E-Mail to mizokami@ewsvx9.mdc.com If there is some interest, I'll summarize to the net.

Thanks, Keith K. Mizokami, KD6YEF mizokami@ewsvx9.mdc.com

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Date: Wed, 23 Jun 1993 19:41:04 GMT

From: haven.umd.edu!darwin.sura.net!udel!gvls1!rossi@ames.arpa

Subject: Ground Rods In Concrete

To: info-hams@ucsd.edu

>>

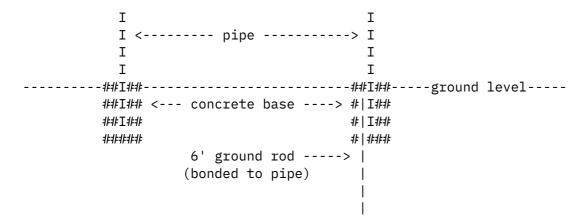
In article <44808.match@sky.civil.utah.edu> <match@sky.civil.utah.edu> writes:
>On Wed, 23 Jun 93 12:19:08 -0400, R. D. Keys wrote:

>> Marvin.... I am curious to know whether the tvro mount was really grounded >> or just mounted in concrete.

>Grounded to what? This thread started as a discussion about using ground >rods imbedded into concrete to create a ground connection. The TVRO >mount was imbedded in the concrete, the concrete was planted in the dirt. >There was no connection made to the TVRO mount in an effort to provide >a ground for it. The TVRO mount WAS the ground connection. Incedentally, >The antenna was not connected to anything, no rig. I'm not even sure >if the coax was connected to the antenna for that matter.

That was my first thought.. I \*DO NOT\* consider a piece of pipe planted in foot or two of concrete to be "grounded".

Now, if it had a 6 foot ground rod bonded to it that continued on through the bottom of the concrete base... well that's different.



The pipe on the left is NOT grounded. The one on the right is. Now, is the one on the right "sufficiently" grounded ???

Let's find out what we are talking about here.

Pete Rossi - WA3NNA

rossi@VFL.Paramax.COM

Paramax Systems Corporation - a Unisys Company Valley Forge Engineering Center - Paoli, Pennsylvania

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Date: 23 Jun 93 23:30:29 GMT

From: news.service.uci.edu!mothra.nts.uci.edu!lockhart@network.UCSD.EDU

Subject: Heathkit SB-101 Manual up for grabs

To: info-hams@ucsd.edu

I have one copy of a Heathkit condensed manual titled "Assembly and Operation of the HEATHKIT SSB TRANSCEIVER Model SSB-101". Its yours if you send me a self addressed 8" x 12 " envelope with sufficient US postage for sixteen ounces from: California to your location.

The intent is to send this manual to someone who ACTUALLY has this Transceiver.

We no longer have this transceiver.

First come first serve. The first person to send me e-mail is the winner. Then you have five calendar days from the time and date of your e-mail to claim the manual. That means I must receive your self-addressed envelope within five calendar days. After that, it goes to the next taker.

/\	<b>/</b> \/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\
Jack C. Lockhart << SNA	ILMAIL
Radio Systems Engineer	-MAIL > LOCKHART@uci.edu
OAC-Network & Telecomm Services	BANG! >!ucbvax!ucivax!lockhart
2209 Central Plant Building	HAM > WD6AEI
University of California, Irvine	AMPR > WD6AEI@n0ary.#nocal.ca.usa.na
Irvine, CA 92717-5475	VOICE > (714) 856-8477
U.S.A	FAX > (714) 725-2270
\/	./\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\
"And in the beginning there was not	ching. And God said, 'let there be
light'. And there was still nothing	g, BUT you could see IT!" -Anonymous
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Date: Wed, 23 Jun 1993 19:07:42 GMT

 $From: \ netcomsv!netcom.com!csun@decwrl.dec.com\\$ 

Subject: INFO NEEDED: biotelemetry system suppliers

To: info-hams@ucsd.edu

Ηi,

I am posting this message for a friend who needs to build a biotelemetry system for a research project. The system will collect physiological measurements (blood pressure, body temperature, etc) from small animals via radio-frequency (RF) link.

We would greatly appreciate it if someone can provide the following information:

- 1) Name and phone number of suppliers for components such as biosensors and RF transmitters.
- 2) Good journals or books on the implementation of such system.
- 3) Suggestions and recommendations from people who have experience in constructing such system.

Charles Sun

EMAIL: csun@netcom.com

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Date: 23 Jun 93 14:29:28

From: iccnews!gobbel@network.UCSD.EDU

Subject: Kenwood TM-742A/942A DTMF remote control

To: info-hams@ucsd.edu

Yes, it can be controlled remotely. Here's what Kenwood sent me after I called up and asked. What they don't make clear is that when the unit is in \*microphone\* remote control mode, any tones heard through the mic will also control the radio, including what comes through the speaker! That mode allows you to do more than the limited "official" DTMF remote control--things like adjusting the squelch, for instance. Also, note that once you've given the access code, there is no access control other than PL tones, until you turn off remote control by sending A#. This also means that you need to be very careful with the mic when it's controlling the radio, because I've found that it's very liberal about what it interprets as a DTMF tone, including such things as white noise, road noise, and the clunks and bangs of hanging up the mic.

The remote mode described below is essentially identical to that for the 732A.

A setup that I've found works very nicely is to run crossband repeat between 220 and 2 meter, and control through 440 simplex. Lets me use my HT on 220, with no control signals on the talk channel. Cool!

73, -Randy, KD6ULI

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TM-942A, TM-742A

REMOTE CONTROL BY EXTERNAL DTMF SIGNAL, Instruction Manual Addendum

This transceiver can be remote-controlled by any other transceiver which can transmit DTMF tones. This instruction is similar to Remote Control by DTMF Microphone, page 61

## **FUNCTION SELECTION**

- 1. Select a common band for the TM-742A/942A and the remote control transceiver, and enter the same frequency on both transceivers. Enter a 3 digit DTSS code (xxx) on the TM-742A/942A (Refer to Note 2.) The DTSS icon must be displayed. (See DTSS code selection, pages 72 through 75.)
- 2. Press the Band Sel key (push the volume control) to select the band to be controlled. DTSS should be turned off on this band.

Repeater Mode: If you intend to operate the transceiver in the Repeater mode, review Instruction Manual pages 59 & 60, Operation as a Repeater, for an explanation of Fixed Band and Cross Band Repeater modes. This is not a 100% duty cycle transmitter. Before selecting the Remote Control mode, set the transmitter output power to Low or Medium, and set the Time-Out-Timer (page 32) at three (3) minutes.

3. Press the RC key on the transceiver. The RC and DTSS icons will flash.

## **OPERATION**

- 1. Be sure the frequency for the remote transceiver is the same as the TM-742A/942A, and that the remote transceiver's DTSS (if so equipped) is off.
- 2. Control mode initialize. Place the remote transceiver in transmit, and send "A" (fourth column key, not alphabet) followed by the correct 3 digit DTSS code (xxx), then "#". Each key press and space must be less than 1 second each. Using DTMF memory will be the most convenient method to send this control string. (Two or three attempts may be required.)
- 3. On the transceiver under remote control, the DTSS icon will display steadily, and the RC icon will continue to flash. The transceiver is now ready to accept external DTMF Remote Control.

FUNCTIONS WHICH CAN BE CONTROLLED BY THE REMOTE TRANSCEIVER

Function DTMF keys (Notes) CALL CH. mode ON 7 CALL CH. mode OFF 8 (Return to VFO mode) Control mode initialize A, xxx, # Control mode exit A, # CTCSS ON 3 CTCSS OFF Frequency entry A, 0-9 (In VFO mode. Use numeric keys) MR mode ON 9 MR mode ch no. select A, xx (In MR mode. Use numeric keys)

MR mode OFF (Return to VFO mode)	8
T.ALT ON T.ALT OFF	1 4
Tone Freq. Sel (xx=2 digit tone ch. no 0138)	B, A, xx
Tone OFF	2 5
TX power (H=no letter, M, L)	0
UP (freq, tone or MCH) Down (freq, tone or MCH)	# *
VFO mode	8
X-Band Repeat ON (& then exit Control mode)	C, A, #
X-Band Repeat OFF (Restart Control mode initial:	A, xxx, #, D ize)

## Notes

- 1. To set the memory channels or tone frequency channels, select the mode, then input the channel number using the numeric keys. For the tone freq. channel numbers, please see page 70. (The UP or DOWN buttons may also be used to increment or decrement channels or VFO frequency, but no acknowledge or feedback is provided.)
- 2. It is presently not legal to transmit control codes below 222MHz. Since it is illegal to transmit control tones (DTMF) on the 2m band, you must enter a 3 digit DTSS code (xxx) on the 440MHz band. The DTSS icon must be displayed on the 440MHz band.
- 3. The microphone, and the mic element, are always on, including in the RC mode. DTMF tones from the transceiver's speaker, or from a telephone with speaker, may "take control" of the radio, just as pressing a DTMF button on the microphone. It is not advisable to leave the radio unattended in the RC mode.
- 4. There is one function which is not supported and cannot be recovered by the remote transceiver: RC cancel, go to the Intercom mode. Press A, B. This is one-way & must be reset with transceiver RC button!

- -

Internet: gobbel@ucsd.edu Hi! I am a .signature virus. Copy me into your .signature to join in! -----Date: Wed, 23 Jun 1993 21:12:16 GMT From: news.crd.ge.com!crd.ge.com!mallick@uunet.uu.net Subject: Measuring SWR (was: Re: Midland Power-Max Dual Band Antenna) To: info-hams@ucsd.edu In article <20a6dj\$ogb@hp-col.col.hp.com>, bobw@col.hp.com (Bob Witte) writes: |> markm@bigfoot.sps.mot.com (Mark Monninger) writes: |> > |> > Maxwell goes to great lengths to debunk the myth that SWR varies along a |> > feedline. It sometimes appears to do so but that is caused by RF flowing |> > on the shield of the cable causing an erroneous reading on the SWR meter |> > and giving the appearance of a variation along the line (which could very |> > well be the cause of the apparent high SWR in this case). So, there's no |> > need to measure it at the antenna. I'm not sure you would get a valid |> > measurment anyway. |> > |> Line loss will definitely make the SWR reading vary along the line. |> It tends to make the SWR look better than it is at the antenna |> because the reflected power is being dissipated in the line. 1> Hopefully, this is not a big deal in a mobile installation with |> short line lengths. |>

Remember that SWR stands for "Standing Wave Ratio", which is the ratio of Vmax to Vmin along the transmission line; the notion of SWR at a "point" on the line is meaningless. Line loss has the effect of making the reflection coefficient (usually

called "gamma" in the EE texts) decrease in magnitude; as it decreases, what you measure as SWR decreases and the transmission line appears to have a better match. For Smith Chart junkies, this means that the little vector which whirls around has a decreasing length with distance traveled toward the generator and begins to spiral

in to the center of the chart.

|> > However, Maxwell also points out a high SWR reading is not necessarily a
|> > Bad Thing and so what Marc says about the performance of the rig being the
|> > best indicator is probably true.
|> >

All the power you put into the transmission line goes somewhere: it either gets radiated (good) or dissipated (bad) in line loss. High SWR is usually only a problem

at HF if you end up with a voltage loop (maximum) at the transmitter; the blue  $\operatorname{\mathsf{glow}}$ 

from the capacitor plates arcing is the tip-off.

I finally got smart and bought a nice R-X noise bridge from Palomar. Unlike the SWR meter, it really tells you what is going on. A great gadget...every antenna junkie

should own one. Too bad it only works well up to 30 MHz.

- -

John A. Mallick WA1HNL GE Corporate Research and Development Schenectady, NY 12301

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Date: Mon, 21 Jun 93 20:52:19 GMT

From: pravda.sdsc.edu!news.cerf.net!usc!howland.reston.ans.net!darwin.sura.net!

udel!news.intercon.com!psinntp!laidbak!tellab5!balr!ttd.teradyne.com!

news@network.UCSD.EDU
Subject: Rat Shack & SAM
To: info-hams@ucsd.edu

In article <JJiF6B2w165w@fatcity.com>, don@fatcity.com (Don Hamiel) writes:

- > root@jackatak.raider.net (Jack GF Hill) writes:
- >> Lighten up...and practice your reading, and your math. November 1992
- >> data, accessible on a PC that takes up only 19MB (with all the bells
- >> and whitsles installed) and is quick is a good deal for \$39.95. If you
- >> stop and think (flame on -- that part may be difficult for you --
- >> flame off; ^) you are paying \$39.95 for a great little program, and
- >> ONLY \$10.00 plus S&H for a new callbook every year! That's a helluva
- >> deal and leave you nowhere to gripe! Sheeesh!

>>

>> 73

>> Jack

Actually it's a pretty poor deal, when you can by a CD-ROM, with the Spring of 93 database and a few hundred MEG of Ham Shareware software, for \$24.95 from Walnut Creek CD-ROM.

------

```
John Rice - K9IJ | "Did I say that ?" I must have, but It was rice@ttd.teradyne.com | MY opinion only, no one else's...Especially (708)-940-9000 - (work) | Not my Employer's.... Licensed since 1959 (708)-438-5065 - (bbs ) | Ex: K8YZR, KH6GHC, WB9CSP, W9MMB, WA1TXV
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Date: 23 Jun 93 20:04:02 GMT From: news-mail-gateway@ucsd.edu

Subject: REMOVE

To: info-hams@ucsd.edu

remove info-hams

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Date: Tue, 22 Jun 93 14:15:45 GMT

From: agate!howland.reston.ans.net!darwin.sura.net!udel!news.intercon.com!psinntp!

laidbak!tellab5!balr!ttd.teradyne.com!news@ames.arpa

Subject: TV vs Cable. Why Pay for a FREE Signal

To: info-hams@ucsd.edu

In article <1993Jun21.123648.21165@ke4zv.uucp>, gary@ke4zv.uucp (Gary Coffman)
writes:

>

- > Cable subscribers are \*already\* paying for what others receive for
- > free. It's in the basic cable charge. The only question is whether
- > local broadcasters should get a cut just like the non-broadcast and
- > "superstation" originators do. Right now the cable companies have a
- > free ride on the programming costs absorbed by the broadcaster while
- > "pirating" away his broadcast audience and charging \*them\* for it.

>

> Gary

Gee, last time I checked, Broadcasters made their money from \*ADVERTISING\*. The ammount that advertisers pay is based on \*AUDIENCE\*. Audience is calculated from the number of homes in the viewing area. The viewing area is extended by fringe cable systems acting as an 'antenna' for the broadcast signal. Thus increasing the number of viewers on which the advertising rate is based.

Therefore, with cable coverage, the number of viewers is increased, the advertising rate increases and the Broadcasters profit increases.

The broadcasters wanted their cake and to eat it too. They wanted what they had (must carry), and for the cable companies to pay for the privilege. The FCC came up with a very equitable rule - take your choice 'must carry' or \$\$\$ but not both. My personal opinion is that if my cable company dropped broadcast signals, I wouldn't cry a drop (except maybe during Football season, if the Bears are having a good year).

As far as the broadcasters should be concerned, the cable company acts as a replacement antenna for the subscriber. Nothing more. If the Broadcaster can't compete with the other programming available, then maybe they should improve

their programming.

(Sorry Gary - I'm on the other side of the fence from ya on this one).

On the other hand - it's mostly because of Cable Television, that "no antennas" is becoming common in new housing developments. At least before cable, you didn't have nearly the trouble putting up a tower in the Suburbs. Most of your neighbors had one too, with a TV antenna on it and a rotator.

Ya can't win..

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John Rice - K9IJ | "Did I say that ?" I must have, but It was rice@ttd.teradyne.com | MY opinion only, no one else's...Especially (708)-940-9000 - (work) | Not my Employer's.... Licensed since 1959 (708)-438-5065 - (bbs ) | Ex: K8YZR, KH6GHC, WB9CSP, W9MMB, WA1TXV
```

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Date: Wed, 23 Jun 1993 21:50:27 GMT

From: iris.mbvlab.wpafb.af.mil!blackbird.afit.af.mil!tkelso@uunet.uu.net

Subject: Two-Line Orbital Element Set: Space Shuttle

To: info-hams@ucsd.edu

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (513) 427-0674, and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below. The Celestial BBS may be accessed 24 hours/day at 300, 1200, 2400, 4800, or 9600 bps using 8 data bits, 1 stop bit, no parity.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

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STS 57
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1 22684U 93 37 A 93173.60416666 .00001585 00000-0 31158-4 0 73 2 22684 28.4618 306.1333 0043081 54.8894 132.0057 15.42493479 169

- -

Dr TS Kelso Assistant Professor of Space Operations tkelso@afit.af.mil Air Force Institute of Technology

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Date: 23 Jun 93 21:28:03 GMT

From: ogicse!flop.ENGR.ORST.EDU!gaia.ucs.orst.edu!sequent!muncher.sequent.com!

dale@network.UCSD.EDU

Subject: Using square wave power

To: info-hams@ucsd.edu

We are considering using a small inverter (200 watt) which produces a square wave to power a small printer and a Kenwood SM230 scope. The printer uses about 30 watts when printing, less on "standby", and the SM230 scope uses 29 watts.

We were thinking of the "Tripp-lite PV200" inverter which will support 200 watts continuous duty, so we are well within the wattage limit. The inverter output is "Squre wave output voltage varies directly with input voltage, and is inversely proportional to load". (This from spec sheet.)

Plan is that we have generator powering battery charger, which keeps a 12 volt deep discharge battery charged. Some 12 volt powered gear hangs on that, along with the inverter. That powers the small printer and SM230. When the generator is down for refueling the printer and scope continue to run.

Question is: Will there be any problems running the printer and scope for 24 hours from a square wave power source? I am most concerned about the Kenwood SM230 station monitor.

I do realize that there are other options -- shutting down the 110V stuff, spending lots of \$\$ on a really great inverter that generates a sine wave, and running QRP. The question is will, the power from this inexpensive inverter damage the equipment?

Thanks, 73, and good luck on Field Day. This event is turning out to be a great simulation of an emergency in which 3 people spend 3 weeks preparing, and can haul about 3 car loads of tents, fuel, food, and thousands of dollars of electronics equipment to a mountain top.

```
dale@sequent.com OR uunet!sequent!dale
Dale Mosby 503-578-9842 N7PEX // Sequent Computer Systems, Inc.
15450 SW Koll Parkway // Beaverton, Or. 97006-6063
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From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!
ux1.cso.uiuc.edu!sdd.hp.com!col.hp.com!news.dtc.hp.com!hpscit.sc.hp.com!
hpuerca.atl.hp.com!jab@network.UCSD.EDU
To: info-hams@ucsd.edu
References <1993Jun09.193854.14470@microsoft.com>, <4061@eram.esi.COM.AU>,
<C8H6pr.J7n@ucdavis.edu>.c
Subject : Re: ham radios in movies
In <C8H6pr.J7n@ucdavis.edu> ez006683@othello.ucdavis.edu (Daniel D. Todd) writes:
>Did anyone hear you while you were using your HT dep in the cave? :-)
Kind of raises the ancient question:
   If an OF falls while sending cw in a cave, will any one hear it? :-)
 Alan Barrow km4ba
                            | If a little knowledge.....
 jab@atl.hp.com
                            is a dangerous thing.....
 ..!gatech!kd4nc!km4ba!alan |
                                   then what is the Anti-Dote???
Date: Tue, 22 Jun 1993 17:10:14 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!gatech!asuvax!
ennews!mcdphx!schuch@network.UCSD.EDU
To: info-hams@ucsd.edu
References <g8Hc6B1w165w@earldom.UUCP>, <2060mm$2qm@usenet.rpi.edu>,
<1993Jun22.092528.1@fnalf.fnal.gov>
Subject : Re: Apollo & hams (was Re: "If you believe they put a man on the moo
In article <1993Jun22.092528.1@fnalf.fnal.gov> higgins@fnalf.fnal.gov (Bill
Higgins -- Beam Jockey) writes:
>In article <2060mm$2qm@usenet.rpi.edu>, strider@clotho.acm.rpi.edu (Greg Moore)
writes:
    Once on a talk show I saw a guy who doubted the moon landings.
>> He asked why we didn't bother bringing a couple hundred pounds of a
>I've wondered whether one could see the Lunokhod rover tracks, or
>Apollo rover tracks, in a telescope. They are tens of kilometers
I seem to remember a TV program, (NOVA I believe) that said one of the apollo
missions left an optical corner relfector on the surface. In the program, some
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school was bouncing a laser off of it to measure the exact distance from the

Date: Wed, 23 Jun 1993 22:30:05 GMT

Earth to the moon.

John

End of Info-Hams Digest V93 #772 \*\*\*\*\*\*\*\*\*\*\*\*